

**Testimony of Kirstin Beatty, director of Last Tree Laws Massachusetts
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RE: FCC GN 25-133 DELETE DELETE DELETE

** All references are meant to be accessed and read through as evidence provided by this submission.*

Electromagnetic fields (EMFs) from antennas and other equipment need to be curtailed significantly for reasons of public and environmental health, especially given the science showing germline mutations to all life, and satellites and other new atmospheric antenna placements are a significant threat to life including heating the climate and altering the atmosphere, therefore:

- ➔ RETAIN AND TIGHTEN REGS FOR LIMITING EXPOSURE INCLUDING ADOPTING SUGGESTIONS BY EXPERTS LISTED AT ICBE-EMF.ORG
- ➔ REMOVE REGS WHICH INTERFERE AND ADD BUREAUCRACY TO LOCAL CONTROL
- ➔ REMOVE REGULATIONS WHICH ADVANCE TECHNOLOGIES FROM CIRCA THE LAST 2 DECADES TO PRESENT
- ➔ AVOID AUCTIONING/ PRIVATIZING ANY MORE SPECTRUM SINCE THIS MAKES IT MORE DIFFICULT SET LIMITS
- ➔ INCREASE TRANSPARENCY, ACCOUNTABILITY, AND STRICT LICENSING FOR APPLICANTS

** Specific examples discussed further below.*

Academic basis of EMF effects - *Biological effects* are explained using irrefutable engineering and physics principles in the open access scientific article 'The Collision between Wireless and Biology' published January 2025 by Dr. Paul Héroux in volume 0 issue 0 of *Heliyon*. Dr. Livio Guiliani, PhD, Director of Research for the Italian Health National Service and spokesperson for ICEMS (dot edu) has expressed that ***climate heating*** occurs from wireless radiation, writing:

...Reference level of IEEE and ICNIRP for people and microwaves is 10 W/Kg.

But 13 W/kg is 1% of the solar constant (1,3 kW/sqm).

Half of the solar constant is reflected, a quarter supply the cycle of water. The residual energy is absorbed by deserts and earth surface. Only 1% is exploited by biosphere.

They (FCC, Ellon Musk and Co.) want to pour on the earth the same quantity of energy that the sun releases to our biosphere.

...We need interim exposure limits based on PP - 0,1 W/sqm as in some Countries of Europe and in Russia, or less - and interim quality standards based on ALARA - 1 mW/sqm... or less - and interim limits for occasional exposures (not valid for earth cover from sky) deduced from the thermal threshold, having applied a safety factor equal to 100... recognizing the thermal

threshold at 2 W/Kg. Thus we could have occasional exposure limits like global exposure limits in China (or less, if we consider the thermal threshold for drugs-dependent people at 1 W/Kg as early Jones suggested...

Atmospheric effects of man-made EMFs are only recently under study, barely considering long-term environmental impacts, and are difficult to understand, but likely operate on the same principles expressed in the preceding article by Dr. Héroux because the atmosphere is ionized, with radiation belts including high energy particles that are primarily electrons and protons. That electromagnetic changes can also have wide-ranging effects is also expressed in a paper indicating that lightning increases acid rain's detrimental impact on soil. Atmospheric chemistry also impacts rain. Sample scientific papers indicating changes include:

- Gombosi, T.I., Baker, D.N., Balogh, A. et al. Anthropogenic Space Weather. Space Sci Rev 212, 985–1039 (2017). <https://doi.org/10.1007/s11214-017-0357-5> [references VLF effects]
- Robinson, T. R., Yeoman, T., and Dhillon, R. S., “Environmental impact of high power density microwave beams on different atmospheric layers,” Contract report for esa, University of Leicester, September 2004
- In the past, I had a scientific article which concluded that man-made EMFs (I can't recall the exact frequencies, but it was either referencing wireless and/or that used for radio) increased static in the atmosphere. I had submitted this to the FCC in the past, but cannot find it now. In any case, static would obviously increase lightning.

Personal & legal basis - Since about 2012, I have realized that being near antennas (utility meters, routers, cell towers, etc.) intensified headaches and other symptoms of ill health, disrupting my ability to return full time to work. Avoiding exposures has become increasingly difficult, interfering with my ability to concentrate and earn a living. The science suggests older women like me or more vulnerable, but everyone suffers with or without realizing because of the ability of exposures to damage the viability of ovaries, sperm, the brain, DNA, mitochondria, and promote or instigate cancers, autoimmune disease, etc. Many do realize - the court case of *Environmental Health Trust et. a. v. FCC (2021)* is just one of many indicators. I am also aware of many people who report disabling effects and who cannot work or conduct self advocacy. The denial and lack of action on the part of the FCC is incredible.

Caveat - Below I have written some thoughts on regulations to remove, retain, or change. However, I'm not an expert, not paid for this filing, nor do I have the resources of a corporation. I am providing what I can the best I can. However, I'm certain the FCC, from Brendan Carr on down, can understand how to apply the principles listed above and also are well aware of the regulations mentioned below. I cannot cover everything, so I mean for the principles to applied to more areas than the regulations I've mentioned.

SAMPLE REGS IN GENERAL

- Remove barriers to local control. Require that all antennas fall under local control and permitting, and remove barriers to local control - including for wattage and frequency type.
- Remove the rule that allowed commercial operators of wireless services to use OTARD antennas.
- Remove regulations that advance new technologies including but not limited to small cell towers.
- Remove regulations that allow expansion of existing antennas without local choice and control, as well as allow changing technology
- Allow HOA's that limit antennas of all types.

- Stop allowing use of higher frequencies like 20 GHz and up, especially okaying unlicensed use.
- Retain requirements for an available and complete public inspection file regarding licensed facilities, including frequencies used, and make it easier for the public to figure out where to get these and how to find nearby antennas such as with a locational map.
- Retain environmental reporting requirements.
- Retain and then further reduce ERP limits for all. Radio and other types of antennas are limited to a maximum ERP.
- Retain frequency restrictions and add more.
- Retain any delays in licensing or permitting for applicants.
- Retain STA rule requiring filing at 30 days or set it sooner, e.g. 15 or 20, because it is in the public interest to prevent misuse and abuse of this rule since these antennas emit EMFs that are harmful.
- Retain and enhance FCC part 15 increasing accountability and restrictions. Add regulations to restrict and test RF from unintentional radiators - RF from fiberoptic connectors is a problem, for example.
- Increase accountability and testing regarding poor power quality, which also emits harmful electromagnetic frequencies.

OTHER:

- KEEP
 - Fees on wireless telecommunications etc.
 - Broadband privacy rules: Privacy protects liberties.
 - Media Ownership Limits to prevent one company from owning too many media outlets in one area. This is necessary to help prevent censorship of ideas and propaganda.
 - Fairness Doctrine related rules - monopoly in media makes this necessary since many broadcasters are owned by one group.
- UPDATE
 - Keep but update the Telecommunication Consumer Protection Act to prevent the spoofing of phone numbers and provide a clear identity so as to make it easier to block spammers/telemarketers and to insure that legitimate calls are not confused with junk.